THE CENTRAL AFRICAN JOURNAL OF MEDICINE

Vol. 57, Nos. 5/8 May/August 2011

CONTENTS

The effects of hospitalization on the sleep patterns of patients aged 20- 30 years old admitted at a central hospital in Harare, Zimbabwe.

HV GUNDANI, K MATONGO

Abstract

Objectives: To establish factors that can affect sleep patterns of hospitalised patients aged between 20 and 30 years at a central hospital. To identify hospital environmental factors and procedures or routines that affect sleep.
Design: A non- experimental descriptive design with structured questions was used.
Settings: An urban, central hospital in Harare, the capital city of Zimbabwe.
Participants: A random sample of 20 participants admitted at a central hospital aged between 20 and 30 years were included in the study.
Main Outcome Measures: Varied indicators of sleeping patterns were analyzed using descriptive statistics.
Results: This study showed that hospitalization affected (80%), a major proportion of the participants. Eleven (68.75%) spent most of their time awake because of hospitalization, the remainder, (31.25%) had their sleep increased because of hospitalization. Ten (62.5%) of the participants' sleep patterns were decreased by noise from other patients through crying and grunting. Furthermore, (31.25%) were disturbed by noise from nurses and their trolleys. Inadequate orientation altered the sleep patterns of all participants.
Conclusion: Various factors influence negatively the sleep of hospitalized patients including lack of orientation of patients on admission. Because of the exploratory nature of this study, it is important to conduct further studies before concrete recommendations can be made.

Cent Afr J Med 2011;57(5/8) 23-25

Introduction

Sleep is a recurrent, altered state of consciousness that occurs for sustained periods, with restoration of energy and well being. Sleep also provides time for repair and recovery of body systems for the next period of wakefulness.[1-2] Most young adults sleep 6 to 8 hours a night and this can vary.[3]

In America at least forty million people suffer from over 70 sleep disorders when hospitalized, and 60 % of the adults report having sleep problems after hospitalization according to the National Sleep Foundation of America 1999-2004 Report.[4] Factors that influence alteration of sleep include medication, pain, position in bed, diet, life style, cultural norms, fear of the unknown, environmental, personal and disease oriented factor.[5-6]

Various studies have shown that both quality and quantity of sleep to be less in hospital than at home. Sleep medications are often the interventions most frequently planned for sleep in hospitals.[7] Sleep medications are often perceived by nurses as well as patients to be the most important interventions despite the fact that other nursing interventions could be more appropriate with respect to the cause of sleep problem.[8] A number of studies also note that physicians without obvious reason or indication automatically prescribe sleep medication.[8] This suggests that physicians do so because of limited knowledge on sleep problems in hospital in general, their diagnosis and their possible cure with non pharmacological methods.[9] In nurses' plans no correlation could be found between quantity and quality of sleep and hospitalization effects.[8]

In Zimbabwe literature on hospitalization and sleep disorder patterns is lacking. Investigators during a feasibility study gathered information from key personnel from a central hospital's medical and surgical wards during the month of April 2010. The data showed that 45% of the admitted patients had their sleep reduced by hospitalization. The lack of documented literature locally motivated the investigators to carry out the study. The purpose of the study was to establish

Department of Nursing Science
University of Zimbabwe, College of Health Sciences
P O Box A178
Avondale, Harare
Zimbabwe

Correspondence to:

Helen V Gundani
Department of Nursing Science
University of Zimbabwe, College of Health Sciences
P O Box A178
Avondale, Harare
Zimbabwe

the factors that affect the sleep patterns of hospitalized patients aged between 20 and 30 years admitted at a central hospital in Harare, Zimbabwe.

Materials and Methods

Twenty randomly selected participants who were admitted at a Harare Central Hospital were included in the study. Demographic data and other data were obtained from participants who completed a questionnaire that had two sections; one on demographic data the other had participants' sleep and perceptions of their sleep patterns while in hospital. Data was analyzed manually using frequency tables, the mean and the median. Participants that did not speak English or Shona the local language, and those below 20 years or above 30 years and those too ill were excluded from the study.

Ethical Considerations

Permission to conduct the study was obtained from the Faculty of Health Sciences Research Ethics Committee and the Medical Director of the Harare central hospital. All the participants consented to participate in the study and were free to withdraw from the study at anytime during the process. Privacy and confidentiality were ensured throughout the process, and anonymity was ensured also by not coding patients' names and personal data anywhere on the data collection forms. All the data that were collected were kept under lock and key for security and only the investigators had access to the data.

Results

The study population comprised of 20 participants with a mean age of 25 years, with an age range of (20-30 years) and a median age of (24.5 years). The majority 8 (40%) were married 6(30%) were single and 6(30%) were either divorced or widowed (Table I).

Table I: Demographic Characteristics (n=20)

Characteristics	Frequency	Percentage (%)
Age range		
20-25	8	40
26-30	12	60
Marital status		
Single	6	30
Married	8	40
Widowed	3	15
Divorced	3	15
Gender		
Male	7	35
Female	13	65
Education		
No education	2	10
Primary - Secondary	14	70
Tertiary	4	20

Twelve (75%) failed to sleep well because of lights that were not switched off while nine (56.25%) failed to sleep because they feared to see others die. Six (30%) failed to sleep because they worried about their capacity to pay hospital fees. Thirteen (65.00%) female participants sought medical attention better than their male counterparts, and 8 (40.00%) married women failed to sleep while in hospital. Ten (62.5%) of participants' sleeping patterns were decreased by noise from other patients through crying or grunting. Furthermore, 5(31.25%) were disturbed by noise from nurses' equipment like trolleys (Table II).

Table II: Hospital environment, procedures/routines that affected sleep, (n=16).

Indicators	Frequency	Percentage (%)
Lack of loved ones in hospital	7	43.75
Noise from other patients	10	62.50
Noise from nurses' trolleys	5	31.25
Fear to see others die	9	56.25
Lights that were always on	12	75.00
Fear of other patients' diseases/illness	7	43.75
Being woken up for vital observation At odd hours	3	18.75
Being woken up for baths at odd hrs	5	31.25
Lack of privacy	5	31.25

Hospitalization affected 16(80%) of the participants. Hospital environment factors and procedures or routines contributed towards participants' sleep disorders; (75%) of these participants spent most of their night time awake because of hospitalization. The remainder, 5(31.25%) had increased sleep. Furthermore, (100%) of the participants had no orientation about services on admission. Eighty percent of the participants did not get any negative remarks on hospitalization from spouses or relatives while 20 % received negative remarks about hospitalization (Table III).

Table III: Factors that affected sleep, (n=16)

Indicators		Frequency	Percentage (%)
Has hospitalization affected your sleep?	(20)		
	Yes	16	80
	No	4	20
Has hospitalisation increased your sleep?	Yes	5	31.5
Has hospitalisation decreased your Sleep?	Yes	11	68.75
Did you get orientation from nurses on hospital set up?	Yes	0	0
	No	20	100
Did your spouse or relative talk negatively about the hospital set up?			
	Yes	4	20
	No	16	20

Discussion

The study participants were randomly chosen from

three wards in the medical and surgical wards of a central hospital in Harare, Zimbabwe. Most of the participants were females 13(65%) and 7(35%) were males, with an age range of 20 to 30 years. This generally shows that females seek medical attention more than males and females are more than males as indicated by the Ministry of Health Survey of 2007.

The participants sample of married couples, were predorminant because of the socio- economic hardships in Zimbabwe. Young people opted for early marriage as a support seeking mechanism. In the study 8(40%) married participants failed to sleep because they missed their loved ones at home. Personal oriented factors can cause alteration of sleep.[5]

Although the sample was small, this study found that a significant proportion 16(80%) of the participants' sleep patterns were affected by hospitalization. This lack of sleep could have been exaggerated by noise from patients and noise from nurses' trolleys 10(62.5%) and 5(31.25%) respectively. Similar results were reported by [1] where 47 % of the participants in three Dutch hospitals had a prescriptive drug to induce sleep on one night. Furthermore, 11(68.75%) of participants had reduced sleep patterns and they spent the whole night time awake, and 5 (31.25%) stated that hospitalization had increased their sleep patterns. Medication, cultural norms and environmental factors affect sleep patterns of hospitalized patients.[5] It is suggested that nurses ward patients who make noise in side wards if available to reduce other patients' sleep disruption. Also, nurses should avoid the use of trolleys with wheels that make noise to reduce noise that disturb patients' sleep.

It is crucial that nurses therefore, need to know their patients and give them a comprehensive and holistic care to reduce stressors that can affect sleep in hospitalized patients. Nurses play an important role in developing and implementing strategies that can mitigate the negative impact of hospitalization.[10]

In addition, the lack of sleep was caused by lack of orientation. This orientation deprivation brought about a new environment culture shock on hospitalization as all the participants (100%) received no orientation. Hospitalization has detrimental effects on admitted patients.[10] Routine orientation sessions, on admission for all patients is therefore recommended to reduce sleep disorder patterns.

Conclusion

Un-switched off lights, noise from other patients, noise from nurses' trolleys, and nurses' routine procedures, limited interaction with immediate family and uncomfortable hospital odours were the prominent factors that influenced sleep disorder patterns of hospitalized patients. These factors that affect sleep patterns go unattended by hospital/clinic personnel. As a result quality of nursing care rendered to hospitalized patients is compromised. Nurses should therefore endeavour to use the Nursing Care Plan Process (NCPP) to conduct thorough assessments of sleep disorders in hospitalized patients. Inadequate orientation services on hospitalization might be due to poor implementation of the NCPP. Nurses might need in-service training in the NCPP use, for better patient management outcomes. Because of the exploratory nature of this study, it is important to conduct further studies before concrete recommendations can be made.

References

1. Halfens R, Cox K, Kuppen-van Merwijik A. *JAN* 2000;19:66-70.
2. Potter R, Perry AG. Basic nursing essentials for practice. 6th ed. Canada. Mosby Inc.
3. Passer WW, Smith RE. Psychology frontier and applications. U.S.A. McGrawhill Publishers, 2001.
4. National Sleep Foundation of America Report 1999-2004.
5. Delaune SC, Ladner PK. Fundamentals of nursing. 2nd ed. U.S.A. Delmar Publishers,2002.
6. Daigneault T. The link between diet and sleep disorders. July 21 2007, Helium Inc. www.helium.com/...the link-between-and sleep- disorders.
7. Johnson K. Sleep disorders treatment. Dec 12 2008, Helium Inc. www.helium.com/items1264599
8. Swierzawski SJ. Sleep Disorder Types Jan 02 2000. Www.healthcommittees.com/sleep-disorders/issues.shtml.
9. Salzman C. Impact of psychiatric symptoms and sleep disorders on quality of patients with Parkinson's Disease. *J Neurol* 1981;8:4(2): 787-805.
10. Kanaka MF, Titler M. Effects of hospitalization on multiple units: *J Applied Nursing Res* 2008;21(1):15-22.
11. Southwell MT. Sleep in hospital at night: *JAN* 2008;31:165-7. http://www.current.com/nursng-theory/application-betty-neumanmodelhtm

Http://www.ncbi.nlm.nih.gov/pmc/articles/pmc/1978346/